Test 1

Total mark

10

Question 1

(5 marks)

A **Choose the correct answer from a, b, c or d :**

1. The density of petroleum oil is .... that of water.
   (a) less than (b) more than (c) equal to (d) double
2. .... don't take the shape of their containers.
   (a) Solids and liquids (b) Gases and liquids (c) Liquids only (d) Solids only
3. All of the following substances conduct electricity, except ....
   (a) iron. (b) aluminium. (c) wood. (d) copper.
4. From inert gases is ....
   (a) nitrogen. (b) helium. (c) oxygen. (d) hydrogen.

B **Give a reason for the following :**

Air is considered as a matter.

....

....

Question 2

(5 marks)

A **Put (✓) or (✗) :**

1. The measuring unit of volume is cm^3. ( )
2. Liquids have definite shapes and volumes. ( )
3. Cooking pans are made up of aluminium as it has a low melting point. ( )
4. Mercury is from solid metals. ( )

B **Calculate the density of iron cube, whose mass 70.2 gm and its volume 9 cm^3.**

....

....

Test 2

Total mark
....
10

Question 1

(5 marks)

A Write the scientific term of each of the following :

1. The mass of a unit volume of the substance. (..................)
2. The change of matter from the solid state to the liquid state by heating. (..................)
3. The measuring unit of density. (..................)
4. The compound molecule which is formed of two hydrogen atoms and one oxygen atom. (..................)

B What happens when ... ?

Increasing the mass of a body to double. (according to its density)

....

....

Question 2

(5 marks)

A Put (✓) or (✗) :

1. Iron is soft, while rubber is hard at room temperature. (   )
2. Oxygen element is a gaseous diatomic molecule. (   )
3. Wood and plastic are bad conductors of heat. (   )
4. The motion of gaseous molecules is limited. (   )

B Calculate the mass of a piece of sulpher, whose volume is 5 cm^3 , knowing that the density of sulpher is 2.1 gm/cm^3

....

....

Answers of Test 1

Question 1

A 1 ⓐ 2 ⓓ 3 ⓒ 4 ⓑ

B Because air has a mass and a volume.

Question 2

A 1 (✔)

2 (✘)

3 (✘)

4 (✘)

B $\text{Density} = \frac{\text{mass}}{\text{volume}}$

$= \frac{70.2}{9}$

$= 7.8 \text{ gm/cm}^3$

Answers of Test 2

Question 1

A
1. Density.
2. Melting process.
3. gm / cm^3
4. Water.

B Its density remains constant.

Question 2

A
1. (✗)
2. (✔)
3. (✔)
4. (✗)

B Mass = density × volume

$= 2.1 \times 5$

$= 10.5$ gm

October Tests

Model 1

Total mark
10

Question 1 — 5 marks

A Put (✓) or (✗) :

1. The density of hydrogen is higher than that of air. ( )
2. When potassium is exposed to air, it rusts after several days. ( )
3. Ammonia molecule consists of one oxygen atom and three hydrogen atoms. ( )
4. The number of protons is often equal to or less than the number of neutrons. ( )

B What happens when ... ?

The nucleus of an atom of an element doesn't contain neutrons.

....

....

Question 2 — 5 marks

A Choose the correct answer :

1. The electrons of potassium atom ($_{19}K$) are distributed in .... energy level(s).
   a. one b. two c. three d. four
2. On adding 30 cm^3 of water to 20 cm^3 of alcohol, the volume of the mixture may become .... cm^3.
   a. 30 b. 48.8 c. 50 d. 54
3. The smell property is a distinguishing factor between ....
   a. iron and copper. b. vinegar and perfume.
   c. wood and plastic. d. silver and iron.
4. The atomic number of an element has 2 electrons in (L) level is ....
   a. 2 b. 4 c. 6 d. 8

B Give a reason for the following :

It is easy to divide an amount of water into small droplets.

....

....

Model 2

Total mark 10

Question 1 5 marks

A Write the scientific term of each of the following :

1. The temperature at which a substance begins to change from the solid state to the liquid state. (..........................)
2. The spaces that are found among the molecules. (..........................)
3. The sum of the numbers of protons and neutrons in the nucleus. (..........................)
4. Imaginary places in which the electrons can move according to their energies. (..........................)

B When a piece of iron of mass 78 gm is put in a graduated cylinder containing 100 cm^3 of water, the reading of the cylinder becomes 110 cm^3.
Calculate the density of water.

....

....

Question 2 5 marks

A Put (✓) or (✗) :

1. When 100 cm^3 of water is added to 100 cm^3 of ethyl alcohol, the volume of the mixture is greater than 200 cm^3. ( )
2. Both sodium ($_{11}Na$) and aluminium ($_{13}Al$) have the same number of electrons in the energy level (L). ( )
3. The compound consists of a combination of atoms of one element. ( )
4. Iron rusts when it is exposed to dry air. ( )

B Give a reason for the following :

The atom is electrically neutral.

....

....

Stage: prep.1 | Subject: Science

Channel: Mr. Science | Year: 2023-2024

Mr.Science
Sherif Hawary

October model Exams 1st Prep.

Model exam (1)

1) Complete the following:

1) The symbol of sodium is .... while that of Sulphur is........................

2) The measuring unit of density is ....and the measuring unit of volume is...................

3) The number of electrons in the outer most energy level in O_8 is .... electrons

4) The liquid element its molecule is composed of two atoms.............. while liquid one atom is..........

2) a) Mention one example for:

1) A bad conductor of electricity.......................................

2) Inactive gaseous element . ...

3) diatomic liquid element. ....

4) liquid good conductor of electricity ....

b) What happens in the following case?

1- Atom gain quantum of energy ....

3) Put sign (√) or (x) in front of each of the following, then correct the wrong one :-

1- Smell property is a distinguishing factor between perfume and ammonia ( )

2- When air is cooled, its density decreases, so it falls down ( )

3- The number of atoms in ammonia NH_3 molecule is 3 atoms ( )

4- Melting point is the temperature at which the matter changes from solid state to liquid state( )

(4) Write the electronic configuration for each of the following:

1- Calcium $_{20}Ca^{40}$ 2-Chlorine $_{17}Cl^{35}$ 3- Nitrogen $_{7}N^{14}$ 4- Argon $_{18}Ar^{40}$

5) Cross the odd word out:

1) Ice-Wood - cork-iron

2) magnesium - potassium -iron-bromine.

3) Rubber - copper - iron – wax

4)Atomic number - protons number - mass number - electrons number.

Model exam (2)

1)Complete the following statements

1.........................alloy is used in making jewels, while ....alloy is used in making heating coils

2- The monoatomic gas is............... while the diatomic gas is..............

3. The nucleus of an atom consists of ....protons and neutral ....

4- ....takes the shape of container while ....has definite shape

2) Write the scientific term of each of the following:

1) the quantity of energy that is gained or lost by an electron when it transfer from one energy level to another . (............................)

2) The simplest pure form for a substance, which could not be decomposed into simple form(...............)

3) imaginary region at which electrons rotate around the nucleus . (.................................)

4) the temperature at which liquid start to change into gas (.................................)

5) Forces among the molecules of the matter. (.................................)

6) Negatively charged particles rotate around the nucleus . (.................................)

3) Correct the underline word:

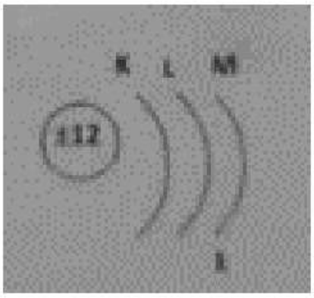
1) S is the chemical symbol of sodium _ (............................)

2) Solid substance has indefinite shape and volume. . (............................)

3) Rubber is solid substance that not be soft after heating . (............................)

4) Atomic number is the sum of protons and neutrons_. (............................)

4) from the figure find:



1) Complete the electronic configuration ....

2) Atomic no ....

3) Mass no ....

4) is this elements chemically active or not?...

5) Write the symbol of each of the followings

1- Sulphur

2- Iron

3- potassium

6) Give reason for each of the following

1- Equal masses of different substances have different volume

....

2- The nucleus has positive charge.

....

Model exam (3)

1) Choose the correct answer from each of the following:

1- Is a liquid element that consists of one atom ....

a-water b-bromine c- mercury d-iodine

2- the electronic configuration of $_{11}Na$ is ....

a-2,8 b-2,8,1 c- 2,8,2 d-2,9

3- ....is the density of 50 gm of substance that occupies 20 cm^3

a-1.5 gm/cm^3 b-2.5 gm/cm^3 c-25 gm/cm^3 d- 5 gm/cm^3

4- Equal masses of different substances have ....volumes

a-constant b-equal C- similar d-different

2)Correct the underlined word:

1) Atom is positively charged in its normal state .
2) The nucleus of the atom is negatively charged.
3) Ammonia molecule consists of three oxygen atoms and one nitrogen .
4)We can distinguish between sugar and salt by color .
5)the chemical symbol of potassium Pt.
6)Acidic solution is a solution is a bad conductor of electricity

3) Find the density of solid substance its mass 1200 gm and its volume 10 cm^3

....

4) a) Cross the odd word out:

1) helium - argon - nitrogen - Neon .
2) Sodium - Oxygen - Helium – Water.

b) What is the charge of

1-protons ....
2- electrons ....
3- nucleus ....
4-Atom..........................

5) Give reason for :

1- the volume of mixture of 200 cm^3 water with 300 cm^3 alcohol is less than 500 cm^3

....

2- Molecule of helium differs from molecule of hydrogen.

....

Model exam (4)

1)Complete the following statements:

1- Ammonia molecule consists of one atom of ……… and three atoms of……………………

2) the number of electrons in $_3Li$ is ……………………………………

3) …………alloy is used in making heating coils

4) Heat is transferred through aluminum because aluminum is ……….. conductor of heat

5) The measuring unit of density is……., while the measuring unit of mass is……………..

6) ……….. alloy is used in making jewels

2)Choose from column B what suits column A

A	B
1) The substance that formed from two or more different elements with constant weight ratios	a. atomic number
2) It the sum. of protons & neutrons inside the nucleus .	b- element .
3) the simplest pure form of matter that cant be analyzed into simpler forms	C- rubber
4) solid substance that soft at room temperature	d – compound

3) Write the scientific term for each of the following: -

1- The atom that gains a quantum of energy. ( )

2- the fundamental building unit of matter. ( )

3- imaginary region around the nucleus at which electrons rotate . ( )

4-Acompound that result from combination between two hydrogen atoms and one oxygen ( )

4)] What is meant by:

1) The density of aluminum is 2.7 gm/cm……………………………………………………………………

2) atomic number of an atom = 4 ……………………………………………………………

5) Show by drawing the electronic configuration of each of following elements:

$^{27}_{13}Al$ $^{20}_{10}Ne$ $^{32}_{16}S$ $^{35}_{17}Cl$

6) Calculate the volume of liquid if its density is 13600 gm/cm³ and its mass 136000 gm

……

……

Stage: prep.1

Channel: Mr. Science

Mr.Science

Sherif Hawary

Subject: Science

Year: 2023-2024

October model Exams 1st Prep.

Model exam (5

Choose the correct answer:

1- The liquid diatomic element is ....

(a) mercury (b) silver (c) bromine (d) chlorine

2-Electric wires are made of ....

(a) wood (b) plastic (c) glass (d) copper

3-A hydrogen molecule consists of .... atom (s)

(a) 1 (b) 2 (c) 3 (d) 4

4-Holders of light bulbs in streets are painted from time to time to protect them from ....

(a) burning (b) rust (c) cutting (d) nitrogen

5- The atom nucleus contains ....

(a) protons & electrons (b) neutrons & electrons (c) protons & neutrons (d) protons only

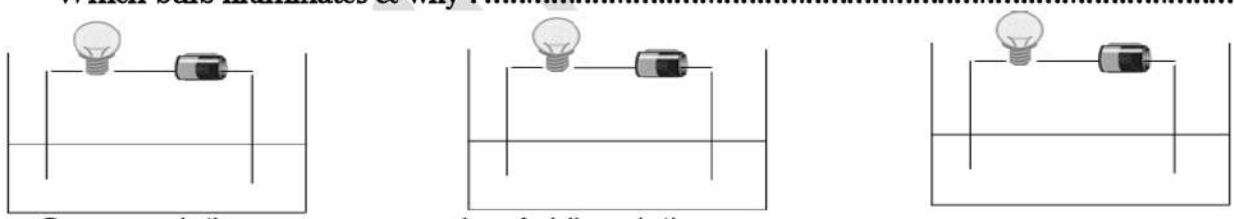
6- In an atom, the second energy level is saturated by .... electrons

(a) 2 (b) 18 (c) 22 (d) 8

2)a)Calculate the density of of ice if its mass 9 gm and its volume 10 cm^3

b- From the opposite figure, answer the following:

Which bulb illuminates & why ?..



a. Sugary solution   b. Acidic solution   c .Hydrogen chloride in benzene

3)Correct the underlined word (s) :

1 - The compound consists from similar atoms.

2- The attraction force between molecules of solid are very weak

3. Sugary solution is a solution which is good conductor of electricity

5)Give reason for:

1) Iron piece sinks in water surface. ....

Stage: prep.1

Channel: Mr. Science

Subject: Science

Year: 2023-2024

October model Exams 1st Prep.

Model exam (6)

1) Choose the correct answer:

1) Negative charged particles with negligible mass... (electrons - protons -neutrons)

2) ....Substance that has definite shape and volume (solid - liquid - gas)

3) Some solids not be soft after heating .... (rubber – iron - coal)

4) ....from inactive elements. ($_{11}Na$ - $_{18}Ar$ – $_{17}Cl$)

2)Give an example of each of the following:

1- A very active metal...

2- Diatomic gaseous element ....

3-A substance that has low melting point...

4- A noble gas...

3) compare between :

P.O.C	Number of protons	Number of neutrons	Electronic configuration	No. of electrons in outermost level	Active or inactive
$^{23}_{11}Na$					
$_{10}Ne$		**10**			

4) Mention one difference between:

1) The electron and the proton.

....

2) Argon and Oxygen

....

5) Give reason for :

1) The smell of perfume spreads from an open bottle all over the room.

2)The atom is electrically neutral.

3)The 3rd energy level (M) in the atom is saturated with 18 electrons.

October model Exams 1st Prep.

Model answer (model 1)

1}

1- Na - S

2- gm/cm^3 - cm^3

3- 6

4- bromine - mercury

2} a) 1- wood , sugary solution

2- Helium , neon , argon

3- bromine

4- salt solution – acidic solution

b) it will stop and heat energy produced due to friction

3} 1- √ 2-x increase 3-x 4-√

4} 1- 2,8,8,2 2- 2,8,7 3- 2,5 4- 2,8,8

5} 1- iron 2- bromine 3- copper 5- mass number

Model answer (model 2)

1}

1- copper -gold / nickel- chrome

2- helium - hydrogen

3- positive – neutrons

4- liquid – solid

2} 1- quantum 2- element 3- energy level 4- boiling point

5 – intermolecular spaces 6- electron

3} 1- Na 2- definite 3- Carbon or Sulphur 4- mass number

4} 1- 2,8,1 2- 11 3- 23 4- active

5} 1- S 2- Fe 3-K

6} 1- Bec. They are different in their densities

2- Bec, it contains positive protons and neutral neutrons .

Model answer (model 3)

1}

1- c 2- b 3- b 4- d

2} 1- neutral 2- positively 3- hydrogen 4- taste 5- K 6- sugary

3} Density = mass / volume =1200 / 10 = 120 gm/cm^3

4} a) 1- scorpion 2- water

b) 1- enable bat to fly

2- filter food from water

5} 1- Bec. Potential energy depends on the height of body and the height doesn't change

2- Bec. They have different atoms

Model answer (model 4)

1}

1- nitrogen / hydrogen

2- 3

3- Nickel - chrome

4- Good

5- gm/cm^3 - gm

6- Copper -gold

2} 1- d 2- a 3- b 4- c

3} 1- excited atom 2- atom 3- energy levels 4- water

4} 1- means that the mass of unit volume of aluminum =2.7 g

2- the number of protons inside the nucleus = the number of electrons outside the nucleus =4

5} 1- 2,8,3 2- 2,8, 3- 2,8,6 4- 2,8,7

6} volume = mass / density = 136000/13600 = 10 cm^3

Model answer (model 5)

1}

1- C 2- d 3- b 4- b 5- c 6- d

2} a) density = mass / volume = 9 / 10 = 0.9 gm/cm^3

b) fig . b Bec. acidic solution is a good conductor of electricity

3} 1- element

2- very strong

3- salt (acidic)

5} 1- because its density heavier than water density

Model answer (model 6)

1}

1- electron 2- solid 3- coal 4- Argon

2}

1- sodium or potassium - 2- hydrogen or oxygen .... 3- wax - 4- helium (neon)

3} in video of lesson

4} 1- electron : negative charged - outside the nucleus

Proton : positively charged - inside the nucleus

2- Argon : inert gas - monoatomic inactive

Oxygen : : active gas - diatomic

5} 1- Because molecules are in a continuous motion

2- Because number of positive protons equal number of negative electrons

3- according to the rule $2n^2$ M= 2x 3^3 =18 electrons

September exam

Science exam

Grade 7

Question 1 : write scientific term

1- the temperature at which a substance begins to change from the liquid state to gaseous state.............................

2- the atom that gains a quantum of energy.............................

3- the forces that binds the molecules of matter together.................................

4- the number of positive proton inside the nucleus....................................

Question 2: put true or false then correct the wrong one

1- aluminum is a very active metal ( )

2- mercury is a liquid diatomic element ( )

3- copper - gold alloy is used in making heating coils ( )

4- the protons is negatively charged particles ( )

5- the molecules of compound consist of similar atoms ( )

Question 3: complete the following

1- the symbol of sodium atom is ...., while symbol of chlorine is..................

2- ....solutions are bad conductor of electricity, while................solution are good conductor of electricity

3- ....take the shape of the container, while ....have definite shape

4- the number of energy level in the largest atom is ....and the third energy level filled with ....electron

Question 4 :

1- calculate the density of 35 gm of a substance that occupies 25 cm3

2- if the nucleus of an atom contain 11 proton and 12 neutron calculate the mass number and the atomic number

Question 5:

